

Internation pplication No.
PCT/JP03/15664

According to International Patent Classification (PC) or to both national classification and IPC  B. FIELDS SEARCHED  Minimum documentation searched (classification system followed by classification symbols)  Int.Cl? C04B35/195, H05K1/03, 3/46, H01B3/12  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1922–1996 Toroku Jitsuyo Shinan Koho 1994–2004 Missuyo Shinan Koho 1994–2004 Jitsuyo Shinan Koho 1994–2004 Jitsuyo Shinan Koho 1996–2004  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category*  Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  X	A. CLASS Int.	SIFICATION OF SUBJECT MATTER C1 C04B35/195, H05K3/46			
Minimum documentation searched (classification system followed by classification symbols)  Int.Cl? C04B35/195, H05K1/03, 3/46, H01B3/12  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1994-2004 Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  X JP 2000-272960 A (Hitachi Metals, Ltd.), 1-11,13-17 A 03 October, 2000 (03.10.00), Claims; examples (particularly, sample No. 14, 26, 35, 44, 92) (Family: none)  X JP 6-199541 A (Matsushita Electric Industrial 1-7,9,13-17 Co., Ltd.), 19 July, 1994 (19.07.94), Abstract; Par. No. [0017]; examples (Family: none)  Further documents are listed in the continuation of Box C. 2-1 Septiant defining the general state of the art which is not considered to be of particular relevance; document of bardical relevance; document of bardical relevance; document of bardical relevance; the claimed invention cannot be special reason (se specialize ason (se specialize) which may throw doubts on priority data end not in conflict which may throw doubts on priority claim(s) or which is crited to establish the publication date of another claims or other special reason (se specialize) when the document is taken along the comment of particular relevance; when the document is taken along document of particular relevance; when the document is taken along document of particular relevance; when the document is such along document of particular relevance; when the document is such along the comment of particular relevance; when the document is such along the comment of particular relevance; when the document is such along the comment of the international search report 2-2 continuation of the international	According t	o International Patent Classification (IPC) or to both na	tional classification and IPC		
Minimum documentation searched (classification system followed by classification symbols)  Int.Cl <sup>7</sup> C04B35/195, H05K1/03, 3/46, H01B3/12  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1994-2004 Kokai Jitsuyo Shinan Koho 1994-2004 Jitsuyo Shinan Toroku Koho 1996-2004  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  X JP 2000-272960 A (Hitachi Metals, Ltd.), 1-11,13-17  A 03 October, 2000 (03.10.00), 12 (claims; examples (particularly, sample No. 14, 26, 35, 44, 92) (Family: none)  X JP 6-199541 A (Matsushita Electric Industrial 1-7,9,13-17 Co., Ltd.), 19 July, 1994 (19.07.94), Abstract; Par. No. [0017]; examples (Family: none)  Further documents are listed in the continuation of Box C. See patent family annex.  ""Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance; document is which any throw doubts on priority data of a obtained on over a form of the international filing date or priority data and not in conflict with the application but closed to considered to involve an inventive sequent is when the document is taken alone of the cause of the particular relevance; document is when the considered to involve an inventive sequent is when the document is taken alone of the actual completion of the international filing date but later document particular relevance; to the claimed invention cannot be considered to involve an inventive sequent is such as the particular	B. FIELD	S SEARCHED			
Special categories of cited documents:	Minimum d Int.	ocumentation searched (classification system followed C1 <sup>7</sup> C04B35/195, H05K1/03, 3/46	5, н01В3/12		
C. DOCUMENTS CONSIDERED TO BE RELEVANT  Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  X	Jits Koka:	uyo Shinan Koho 1922-1996 i Jitsuyo Shinan Koho 1971-2004	Toroku Jitsuyo Shinan Koho Jitsuyo Shinan Toroku Koho	o 1994-2004 o 1996-2004	
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.  X	Electronic d	lata base consulted during the international search (nam	e of data base and, where practicable, sea	rch terms used)	
The comment of the priority date claimed which may throw doubts on priority claim(s) or which is special reason (as specified)  The comment which may throw doubts on priority claim(s) or which is special reason (as specified)  To document which may throw doubts on priority claim(s) or which is special reason (as specified)  The comment of the priority date claimed which may throw doubts on priority claim(s) or which is special reason (as specified)  To document metering to an onal disclosure, use, exhibition or other means of comment referring to an onal disclosure, use, exhibition or other means of comment published prior to the international filing date but later than the priority date claimed  The continuent of particular relevance; the claimed invention cannot be considered to the original reason (as specified)  The continuent of particular relevance; the claimed invention cannot be considered to relevance; the claimed invention cannot be considered to involve an inventive step when the document is taken alone document referring to an onal disclosure, use, exhibition or other means of the comment of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is committed with one or more other such document in committed with one or more other such document in committed in the art document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered or involve an inventive step when the document is considered to involve an inventive step when the document is considered to involve an inventive step when the document is considered to invo	C. DOCU	MENTS CONSIDERED TO BE RELEVANT		· · · · · · · · · · · · · · · · · · ·	
A 03 October, 2000 (03.10.00), Claims; examples (particularly, sample No. 14, 26, 35, 44, 92) (Family: none)  X JP 6-199541 A (Matsushita Electric Industrial 1-7,9,13-17 Co., Ltd.), 19 July, 1994 (19.07.94), Abstract; Par. No. [0017]; examples (Family: none)  Special categories of cited documents: (Family: none)  Special categories of cited documents: earlier document defining the general state of the art which is not considered to be of particular relevance earlier document but published on or after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention cannot be considered to the cash bilsh the publication date of another citation or other special reason (as specified) of document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed  Date of the actual completion of the international search  Date of the actual completion of the international search  Date of the actual completion of the international search	Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.	
Co., Ltd.), 19 July, 1994 (19.07.94), Abstract; Par. No. [0017]; examples  (Family: none)  Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance: "B" earlier document but published on or after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "C" document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other than the priority date claimed  Date of the actual completion of the international filing date but later than the priority date claimed  Date of the actual completion of the international search  Date of mailing of the international search report		03 October, 2000 (03.10.00), Claims; examples (particular) 14, 26, 35, 44, 92)	_	•	
Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date or priority date and not in conflict with the application but cited to considered to be of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family  Date of the actual completion of the international search  "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family	х	Co., Ltd.), 19 July, 1994 (19.07.94), Abstract; Par. No. [0017]; examples			
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"A" document defining the general state of the art which is not considered to be of particular relevance earlier document but published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means document referring to an oral disclosure, use, exhibition or other than the priority date claimed  "B" addition or other special reason (as specified)  document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  document referring to an oral disclosure, use, exhibition or other means  "P" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed  "A" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family  Date of the actual completion of the international search  Date of the actual completion of the international search	Further documents are listed in the continuation of Box C. See patent family annex.				
04 March, 2001 (01:05:04)					
Name and mailing address of the ISA/ Japanese Patent Office  Telephone No.	Japa	nese Patent Office			

Int. Cl7 C04B 35/195 H05K 3/46

B. 調査を行った分野

調査を行った最小限資料(国際特許分類(IPC))

Int. C1' C04B 35/195 H05K 1/03 3/46 H01B 3/12

最小限資料以外の資料で調査を行った分野に含まれるもの

日本国実用新案公報

1922-1996年

日本国公開実用新案公報

1971-2004年

日本国登録実用新案公報

1994-2004年

日本国実用新案登録公報

1996-2004年

国際調査で使用した電子データベース(データベースの名称、調査に使用した用語)

C. 関連する 引用文献の	らと認められる文献 	関連する
カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	請求の範囲の番号
X	JP 2000-272960 A(日立金属株式会社) 2000.10.03,	1-11, 13-17
Α	特許請求の範囲,実施例(特に試料No. 14, 26, 35, 44, 92) (ファミリーなし)	12
X	JP 6-199541 A(松下電器産業株式会社) 1994.07.19, 要約, 段落0017, 実施例 (ファミリーなし)	1-7, 9, 13-17

C欄の続きにも文献が列挙されている。

□ パテントファミリーに関する別紙を参照。

- \* 引用文献のカテゴリー
- 「A」特に関連のある文献ではなく、一般的技術水準を示す もの
- 「E」国際出願日前の出願または特許であるが、国際出願日 以後に公表されたもの
- 「L」優先権主張に疑義を提起する文献又は他の文献の発行 日若しくは他の特別な理由を確立するために引用する 文献(理由を付す)
- 「O」口頭による開示、使用、展示等に言及する文献
- 「P」国際出願日前で、かつ優先権の主張の基礎となる出願

- の日の後に公表された文献
- 「T」国際出願日又は優先日後に公表された文献であって 出願と矛盾するものではなく、発明の原理又は理論 の理解のために引用するもの
- 「X」特に関連のある文献であって、当該文献のみで発明 の新規性又は進歩性がないと考えられるもの
- 「Y」特に関連のある文献であって、当該文献と他の1以 上の文献との、当業者にとって自明である組合せに よって進歩性がないと考えられるもの

電話番号 03-3581-1101 内線 6791

「&」同一パテントファミリー文献

国際調査を完了した日 04.03.2004 国際調査報告の発送日 23.3.2004 国際調査機関の名称及びあて先 特許庁審査官(権限のある職員) 大橋 賢一 大橋 賢一 大橋 賢一

様式PCT/ISA/210 (第2ページ) (1998年7月)

東京都千代田区霞が関三丁目4番3号